

## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

01-01 CATASAUQUA MIDDLE SCHOOL

GOAL:

*To take a lesson and move the focus from a TEACHER DIRECTED activity to a LEARNER CENTERED activity by using the Essential Features of Inquiry and their Variations. To sharpen, clarify, analyze, communicate and justify explanations.*

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**TIMELINE:**

Fall of 2011-2012

PLAN STRATEGIES FOR IMPLEMENTATION	OUTCOMES TO INDICATE SUCCESS:	RESOURCES:
<p>Teacher will use a motivate technique to generate students interest by using folk tales, stories, pictures, web sites. :</p> <p>To take an opening statement and adjust the Inquiry features to move from a Teacher Directed statement to a Learner Centered question to a science lesson.</p>	<p>Students will work in small groups and brainstorm ideas from opening statement and record ideas on tablet paper and then placed on chart paper.</p>	<p>Writing paper, chart paper, markers and pencils.</p>

<p>After responses recorded on chart paper, the chart paper will be hung around the room for class viewing. The class will identify similarities on a separate piece of chart paper. Each group will place a sticker on the three items that interest them the most to explore. The top three items will be written in the science notebook.</p>	<p>Learners will identify areas of interest to study and research.</p>	<p>Sticker and science notebook</p>
<p>Each group will pick one response as their focus to drive the interest of the prior knowledge portion of the lesson.</p>	<p>Students will use prior knowledge focus question to gather information using different sources.</p> <p>Computer</p> <p>Library</p> <p>People in the field</p>	<p>Computer, professionals in the field, literature search</p>

<p>After each group gathers prior knowledge information. Each group will present its research in any format they chose. Slide show, poster, speech, etc.</p> <p>After presentation. Resume science lesson schedule for study.</p>	<p>Presenting of prior knowledge through group presentation.</p>	<p>Materials used for presentation purpose.</p> <p>Science kit and notebook.</p>
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## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: NAME and SCHOOL DISTRICT: 02/172011

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5<sup>th</sup> Grade)

### GOAL:

**District:** CASD students (K-5) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

**Grade K Goal:** To develop a common language by modeling processing skills of observing and questioning.

**1<sup>st</sup> Grade Goal:** By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**2<sup>nd</sup> Grade Goal:** By the end of the second grade school year, students will implement scientific explanations that state claims. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**3<sup>rd</sup> Grade Goal:** By the end of the third grade school year, students will implement scientific explanations that state claims and be supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the reasoning component.

**4<sup>th</sup> Grade Goal:** By the end of the fourth grade school year, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

**5<sup>th</sup> Grade Goal:** Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

### TIMELINE:

**2011-2012 School Year**

#### PLAN STRATEGIES FOR IMPLEMENTATION:

Teacher will review scientific explanations:

- Meaning of an explanation
- Components of an explanation
- Provide models of explanations (strengths, weaknesses, connections to everyday explanations)
- Discuss rationale for creating explanations

Teacher and students create scientific explanations utilizing claims and evidence.

Teachers will assess and provide feedback to students.

#### OUTCOMES TO INDICATE SUCCESS:

By the end of the second grade school year, students will state claims and support the claims with evidence.

The students will communicate the two components of a scientific explanation through notebooks, peer and teacher observation, and rubrics.

#### RESOURCES

FOSS, STC science modules

Student science notebooks, textbooks, and storybooks.

Basic Explanation Rubric



## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: NAME and SCHOOL DISTRICT: 09/08/1961

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5<sup>th</sup> Grade)

### GOAL:

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**5<sup>th</sup> Grade Goal:** Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

### TIMELINE:

**2011-2012 School Year**

#### PLAN STRATEGIES FOR IMPLEMENTATION:

Teacher will review scientific explanations:

- Meaning of an explanation
- Components of an explanation
- Provide models of explanations (strengths, weaknesses, connections to everyday explanations)
- Discuss rationale for creating explanations

Teacher and students create scientific explanations utilizing claims and evidence.

Teachers will assess and provide feedback to students

#### OUTCOMES TO INDICATE SUCCESS:

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#### RESOURCES

FOSS, STC science modules

Student science notebooks, textbooks, and storybooks.

Basic Explanation Rubric





## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

Catasauqua School District

GOAL:

*By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, and/ or written form. The teacher will guide the reasoning and evidence components.*

TIMELINE:

2011 – 2012 school year

PLAN STRATEGIES FOR IMPLEMENTATION:

Teacher will introduce scientific explanations through modeling and scaffolding:

- \*Meaning of an explanation
- \*Components of an explanation
- \*Provide models of explanations (strength, weaknesses, connections to everyday explanations)

Teacher and students create scientific explanations utilizing claims and evidence.

OUTCOMES TO INDICATE SUCCESS:

By the end of first grade, students, with guidance from the teacher, will state claims and support them with evidence.

Students will communicate scientific knowledge by illustrations, verbally or through writing.

RESOURCES

- \* Weather Kit
- \* Liquids and Solids
- \* Organisms
- \* Student Notebook
- \* Teacher Inquiry Notebook
- \* Rubric

## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: Sheckler Elementary School/Kindergarten  
Catasauqua School District

GOAL: To develop a common language by modeling processing skills of observing and questioning

*\*working with a team*

TIMELINE: September 2011- June 2012

### PLAN STRATEGIES FOR IMPLEMENTATION:

1. The students will use their senses to develop observation skills.
2. The students will use "I notice..." and "I wonder..." statements.
3. The students will ask questions based on "I wonder..." statements.

### OUTCOMES TO INDICATE SUCCESS:

1. The teacher will observe the students while they use their senses to gain new knowledge.
2. The teacher will record "I notice..." and "I wonder..." statements on a checklist.
3. The teacher will use sharing time to help the students express their questions.

### RESOURCES

1. Teacher observation
2. Chart paper
3. Time
4. FOSS science modules

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## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

Catasauqua Middle School

12/02/54

GOAL: CASD students (K-6) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

6<sup>th</sup> Grade Goal: By the end of sixth grade, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done by groups in written form.

TIMELINE:

Academic school year 2011-2012

### PLAN STRATEGIES FOR IMPLEMENTATION:

- \*The teacher will explain the three components of a Scientific Explanation.
- \*During each Marking Period/module, one of the components will be added.
- \*During the Final Marking Period, students will write a complete Scientific Explanation with all three components.
- \*Practice throughout modules.

### OUTCOMES TO INDICATE SUCCESS:

- \*Students will use the correct language verbally and written for the Scientific Explanation
  - “I claim that...” based on the data collected, questions and observations
  - “My evidence shows that ...” by backing up the claim with data such as facts, descriptions or numbers
  - Reasoning:
    - “My evidence makes sense because I know that...” by using prior knowledge, science concepts or expert sources

### RESOURCES

- \*Investing in Innovation binder
- \*Different modules used
- \*Harcourt Science textbook
- \*NSRC – National Science Resources Center booklet

## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

Catasauqua School District

GOAL:

*By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, and/ or written form. The teacher will guide the reasoning and evidence components.*

TIMELINE:

2011 – 2012 school year

PLAN STRATEGIES FOR IMPLEMENTATION:

Teacher will introduce scientific explanations through modeling and scaffolding:

- \*Meaning of an explanation
- \*Components of an explanation
- \*Provide models of explanations (strength, weaknesses, connections to everyday explanations)

Teacher and students create scientific explanations utilizing claims and evidence.

OUTCOMES TO INDICATE SUCCESS:

By the end of first grade, students, with guidance from the teacher, will state claims and support them with evidence.

Students will communicate scientific knowledge by illustrations, verbally or through writing.

RESOURCES

- \* Weather Kit
- \* Liquids and Solids
- \* Organisms
- \* Student Notebook
- \* Teacher Inquiry Notebook
- \* Rubric

## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: Sheckler Elementary School/Kindergarten  
Catasauqua School District

GOAL: To develop a common language by modeling processing skills of observing and questioning

*\*working with a team*

TIMELINE: September 2011- June 2012

### PLAN STRATEGIES FOR IMPLEMENTATION:

1. The students will use their senses to develop observation skills.
2. The students will use "I notice..." and "I wonder..." statements.
3. The students will ask questions based on "I wonder..." statements.

### OUTCOMES TO INDICATE SUCCESS:

1. The teacher will observe the students while they use their senses to gain new knowledge.
2. The teacher will record "I notice..." and "I wonder..." statements on a checklist.
3. The teacher will use sharing time to help the students express their questions.

### RESOURCES

1. Teacher observation
2. Chart paper
3. Time
4. FOSS science modules

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## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: Sheckler Elementary School/Kindergarten  
Catasauqua School District

GOAL: To develop a common language by modeling processing skills of observing and questioning

*\*working with a team*

TIMELINE: September 2011- June 2012

### PLAN STRATEGIES FOR IMPLEMENTATION:

1. The students will use their senses to develop observation skills.
2. The students will use "I notice..." and "I wonder..." statements.
3. The students will ask questions based on "I wonder..." statements.

### OUTCOMES TO INDICATE SUCCESS:

1. The teacher will observe the students while they use their senses to gain new knowledge.
2. The teacher will record "I notice..." and "I wonder..." statements on a checklist.
3. The teacher will use sharing time to help the students express their questions.

### RESOURCES

1. Teacher observation
2. Chart paper
3. Time
4. FOSS science modules

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NAME and SCHOOL DISTRICT:

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5<sup>th</sup> Grade)

GOAL:

**District:** CASD students (K-5) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

**Grade K Goal:** During the school year, the teacher will model scientific explanations that state claims.

**1<sup>st</sup> Grade Goal:** By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, verbally, and/or in written form.

**2<sup>nd</sup> Grade Goal:** By the end of the second grade school year, students will implement scientific explanations that state claims. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**3<sup>rd</sup> Grade Goal:** By the end of the third grade school year, students will implement scientific explanations that state claims and be supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the reasoning component.

**4<sup>th</sup> Grade Goal:** By the end of the fourth grade school year, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

**5<sup>th</sup> Grade Goal:** Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

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TIMELINE:

**2011-2012 School Year Fifth Grade**

PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
Review prior knowledge -- claims, evidence, and reasoning	By the end of fifth grade the students will write claims supported by evidence and reasoning using the student notebook, peer and teacher observation, and teacher supplied rubric.	Rubric
Model process		FOSS kits
Give students criteria and discuss		student notebooks
Give students rubric and discuss		Science magazine

NAME and SCHOOL DISTRICT:

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5<sup>th</sup> Grade)

GOAL:

**District:** CASD students (K-5) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

**Grade K Goal:** During the school year, the teacher will model scientific explanations that state claims.

**1<sup>st</sup> Grade Goal:** By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, verbally, and/or in written form.

**2<sup>nd</sup> Grade Goal:** By the end of the second grade school year, students will implement scientific explanations that state claims. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**3<sup>rd</sup> Grade Goal:** By the end of the third grade school year, students will implement scientific explanations that state claims and be supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the reasoning component.

**4<sup>th</sup> Grade Goal:** By the end of the fourth grade school year, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

**5<sup>th</sup> Grade Goal:** Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

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TIMELINE:

**2011-2012 School Year: Fourth Grade**

PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
<p>Teacher will review scientific explanations:</p> <ul style="list-style-type: none"><li>• Meaning of an explanation</li><li>• Components of an explanation</li><li>• Provide models of explanations (strengths, weaknesses, connections to everyday explanations)</li><li>• Discuss rationale for creating explanations</li></ul> <p>Teacher will review prior knowledge of claims, evidence, and reasoning.</p> <p>Introduce the Criteria Rubric and attach to notebook.</p> <p>Introduce and utilize teacher generated worksheet containing the three focus areas.</p> <p>Investigation #1=Modeling through teacher-guided instruction:claim, evidence, reasoning</p> <p>Investigation #2=Group work:claims, evidence and reasoning</p> <p>Investigation #3=Individual work for claims,</p>	<p>By the end of the fourth grade year, the student</p> <p>will be able to write claims, support them with evidence, and use reasoning to demonstrate</p> <p>scientific knowledge in a variety of topic areas.</p> <p>Communication of the three levels of scientific explanation will occur through FOSS notebooks, peer observations, teacher observations, and appropriate rubrics.</p>	<p>* FOSS Science Kits</p> <p>*Textbooks</p> <p>*FOSS Notebooks</p> <p>*Science Story Books</p> <p>*Video(s)</p> <p>*BaseExplanationRubric</p> <p>*Worksheets</p>

evidence, and reasoning		
Teacher will assess and provide feedback to students. Students will also provide feedback to each other.		

## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

Catasauqua Area School District – Sheckler (K-4) and CMS (5)

GOAL:

**District:** CASD students (K-5) will implement the use of scientific explanations that include the components of a claim, evidence, and reasoning.

**Grade K Goal:** To use common language by modeling processing skills of observing and questioning.

**1<sup>st</sup> Grade Goal:** By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done in written form or stated verbally. The teacher will model the evidence and reasoning components

**2<sup>nd</sup> Grade Goal:** By the end of the second grade school year, students will implement scientific explanations that state claims. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**3<sup>rd</sup> Grade Goal:** By the end of the third grade school year, students will implement scientific explanations that state claims and be supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the reasoning component.

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**5<sup>th</sup> Grade Goal:** Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

TIMELINE:



PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
<p><b>Grade 1</b></p> <p>1. Model claims based on evidence and claims not based on evidence.</p> <p>2. Utilize a sentence starter (I claim that...) to aid students in writing or verbally stating their own claim.</p> <p>3. Use “think alouds” to help model the evidence and reasoning components.</p> <p>4. To aid in modeling the reasoning component, incorporate added scientific information about a given topic through books, Internet, videos, etc.</p>	<p>1. Survey children to see if they think a given claim is or isn’t based on evidence.</p> <p>2. Children write their own claim in a Science notebook or tell their claim to the teacher.</p> <p>3. Children complete charts, worksheets, and/or draw in the Science notebook to show data/evidence. Teacher records evidence and/or reasoning on chart paper with some student input .</p> <p>4. Teacher records reasoning on chart paper with some student input.</p>	<p>1. Science Kits- Weather, Solids and Liquids, Organisms</p> <p>2. Notebook from Asset Inquiry Institute</p> <p>3. Monarch Watch’s Inquiry Curriculum for Monarch Butterflies</p> <p>4. Journey North website <a href="http://www.learner.org/jnorth">http://www.learner.org/jnorth</a> (monarch butterflies)</p> <p>5. Collaboration with peers</p>

## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

Catasauqua Middle School

12/02/54

GOAL: CASD students (K-6) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

6<sup>th</sup> Grade Goal: By the end of sixth grade, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done by groups in written form.

TIMELINE:

Academic school year 2011-2012

### PLAN STRATEGIES FOR IMPLEMENTATION:

- \*The teacher will explain the three components of a Scientific Explanation.
- \*During each Marking Period/module, one of the components will be added.
- \*During the Final Marking Period, students will write a complete Scientific Explanation with all three components.
- \*Practice throughout modules.

### OUTCOMES TO INDICATE SUCCESS:

- \*Students will use the correct language verbally and written for the Scientific Explanation
  - “I claim that...” based on the data collected, questions and observations
  - “My evidence shows that ...” by backing up the claim with data such as facts, descriptions or numbers
  - Reasoning:
    - “My evidence makes sense because I know that...” by using prior knowledge, science concepts or expert sources

### RESOURCES

- \*Investing in Innovation binder
- \*Different modules used
- \*Harcourt Science textbook
- \*NSRC – National Science Resources Center booklet

**NAME and SCHOOL DISTRICT:**

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5<sup>th</sup> Grade)

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<b>PLAN STRATEGIES FOR IMPLEMENTATION:</b>	<b>OUTCOMES TO INDICATE SUCCESS:</b>	<b>RESOURCES</b>
Teacher will review scientific explanations: <ul style="list-style-type: none"><li>• Meaning of an explanation</li><li>• Components of an explanation</li><li>• Provide models of explanations (strengths, weaknesses, connections to everyday explanations)</li><li>• Discuss rationale for creating explanations</li></ul> Teacher and students create scientific explanations utilizing claims and evidence.  Students create scientific explanations utilizing claims and evidence. Teacher will assess and provide feedback to students	By the end of the third grade school year, students will state claims and support the claims with evidence.  The students will communicate the two components of a scientific explanation through notebooks, peer and teacher observation, and rubrics.	FOSS, STC science modules  Student science notebooks, textbooks, and storybooks.  Basic Explanation Rubric

## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT: NAME and SCHOOL DISTRICT: 11/05/2011

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5<sup>th</sup> Grade)

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### TIMELINE:

**2011-2012 School Year**

#### PLAN STRATEGIES FOR IMPLEMENTATION:

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Teacher and students create scientific explanations utilizing claims and evidence.

Teachers will assess and provide feedback to students.

#### OUTCOMES TO INDICATE SUCCESS:

By the end of the second grade school year, students will state claims and support the claims with evidence.

The students will communicate the two components of a scientific explanation through notebooks, peer and teacher observation, and rubrics.

#### RESOURCES

FOSS, STC science modules

Student science notebooks, textbooks, and storybooks.

Basic Explanation Rubric



## INSTITUTE FOR INQUIRY ACTION PLAN

Sheckler Elementary School

Catasauqua Area School District

NAME and SCHOOL DISTRICT:

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5<sup>th</sup> Grade)

GOAL:

**District:** CASD students (K-5) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

**Grade K Goal:** To develop a common language by modeling processing skills of observing and questioning.

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will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

TIMELINE:

**2011-2012 School Year**

**3<sup>rd</sup> GRADE: Claudette Burkner, Laura Gregson, Cindy Kuntzman, Wendy Laubenstein, Valerie Roberts, Kelly Strauch, and James Wilson**

PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
<p>Teacher will review scientific explanations:</p> <ul style="list-style-type: none"><li>• Meaning of an explanation</li><li>• Components of an explanation</li><li>• Provide models of explanations (strengths, weaknesses, connections to everyday explanations)</li><li>• Discuss rationale for creating explanations</li></ul> <p>Teacher and students create scientific explanations utilizing claims and evidence.</p> <p>Students create scientific explanations utilizing claims and evidence.</p> <p>Teacher will assess and provide feedback to students</p>	<p>By the end of the third grade school year, students will state claims and support the claims with evidence.</p> <p>The students will communicate the two components of a scientific explanation through notebooks, peer and teacher observation, and rubrics.</p>	<p>FOSS, STC science modules</p> <p>Student science notebooks, textbooks, and storybooks.</p> <p>Basic Explanation Rubric</p> <p>Colleague Collaboration</p>

## INSTITUTE FOR INQUIRY ACTION PLAN

NAME and SCHOOL DISTRICT:

Sheckler0127

GOAL:

*To develop the process skill communication for scientific explanations by using common language "claims" and "evidence".*

TIMELINE:

2011/2012 school year

PLAN STRATEGIES FOR IMPLEMENTATION:

Teacher would first model the desired scientific explanation vocabulary "I claim....." and "My evidence shows.....".

Teacher would then have children practice scientific explanation vocabulary "I claim....." and "My evidence shows ...." During the reflective part of each module lesson.

Children would then begin to write their scientific claims and make reason with them tied into their focus questions.

OUTCOMES TO INDICATE SUCCESS:

Children will use common language "I claim... and My evidence shows when explaining their investigations.

Children will be able to write I claim.... and My evidence shows explanations and tie them into the focus question.

RESOURCES

SIE Modules

Science Notebooks

Notes and readings from Asset Inquiry Class

Computers/internet



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Catasauqua Area School District- May- July 1, 2011

NAME and SCHOOL DISTRICT:

Catasauqua Area School District

- Sheckler Elementary School (K-4)
  - Catasauqua Middle School (5th Grade)
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GOAL:

**District:** CASD students (K-5) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

**Grade K Goal:** To develop a common language by modeling processing skills of observing and questioning.

**1st Grade Goal:** By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**2nd Grade Goal:** By the end of the second grade school year, students will implement scientific explanations that state claims. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**3rd Grade Goal:** By the end of the third grade school year, students will implement scientific explanations that state claims and be supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the reasoning component.

**4th Grade Goal:** By the end of the fourth grade school year, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

**5th Grade Goal:** Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

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**TIMELINE:**

**2011-2012 School Year**

**2nd Grade- Brad Evans and Erica Schlamp**

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PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
<p>Teacher will review scientific explanations:</p> <ul style="list-style-type: none"> <li>• Meaning of a claim</li> <li>• Components of a claim explanation</li> <li>• Provide models of evidence explanations (strengths, weaknesses, connections to everyday explanations)</li> <li>• Discuss rationale for creating reasoning explanations</li> </ul>	<p>By the end of the Second Grade school year, students will implement explanations and state claims.</p> <p>The students will communicate components of a scientific claim and evidence through notebooks, peer and teacher observation, and rubrics.</p>	<p>FOSS, STC science modules</p> <p>Student science notebooks, textbooks, and storybooks.</p> <p>Basic Explanation Rubric</p> <p>Colleague Collaboration</p>



## INSTITUTE FOR INQUIRY ACTION PLAN

NAME AND SCHOOL DISTRICT:

Sheckler0922

GOAL:

To support inquiry in my classroom by focusing on the process skills of observing (obtaining accurate evidence) and communicating.

TIMELINE:

September 2011 – June 2012

PLAN STRATEGIES FOR IMPLEMENTATION:

~ Teacher will conduct a “Think Aloud” to guide the learners to make appropriate observations.

~ Teacher will provide many opportunities for learners to use their senses to describe an object or event.

~ Teacher will use and post graphic organizers (Venn diagram) to visually show similarities / differences.

~ Teacher will provide many opportunities for students to use rulers and measuring cups in the classroom.

~Teacher will model “scientific common language” throughout the week.

~ Teacher will discuss and post “I notice... I wonder...” statements every day

OUTCOMES TO INDICATE SUCCESS:

The learner will:

~ use more than one of the senses to make observations.

~ identify the obvious features of an object or event.

~ identify similarities and differences of an object or event.

~ make measurements and/or comparisons using appropriate instruments.

~ use the correct science terms in oral discussions.

~ illustrate and label a diagram to correspond with the investigation.

RESOURCES

~ Student science notebooks

~ science modules

~ oral discussions

~ rulers and measuring cups

~ notebook from Asset Training

~ charts / illustrations

~ math books

	<p>~ describe the main points of what has been done in an investigation.</p> <p>~ use appropriate charts and drawings to convey information.</p>	
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Catasauqua Area School District- November- July 1, 2011

NAME and SCHOOL DISTRICT:

Catasauqua Area School District

- Sheckler Elementary School (K-4)
  - Catasauqua Middle School (5th Grade)
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GOAL:

**District:** CASD students (K-5) will implement the use of scientific explanations that include the components of claims, evidence, and reasoning.

**Grade K Goal:** To develop a common language by modeling processing skills of observing and questioning.

**1st Grade Goal:** By the end of the first grade school year, students will implement scientific explanations that state claims based on evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**2nd Grade Goal:** By the end of the second grade school year, students will implement scientific explanations that state claims. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**3rd Grade Goal:** By the end of the third grade school year, students will implement scientific explanations that state claims and be supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the reasoning component.

**4th Grade Goal:** By the end of the fourth grade school year, students will implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

**5th Grade Goal:** Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will continue to defend their thinking with reasoning statements. This will be done independently by verbal or written form.

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**TIMELINE:**

**2011-2012 School Year**

**2nd Grade- Brad Evans and Erica Schlamp**

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PLAN STRATEGIES FOR IMPLEMENTATION:	OUTCOMES TO INDICATE SUCCESS:	RESOURCES
<p>Teacher will review scientific explanations:</p> <ul style="list-style-type: none"> <li>• Meaning of a claim</li> <li>• Components of a claim explanation</li> <li>• Provide models of evidence explanations (strengths, weaknesses, connections to everyday explanations)</li> <li>• Discuss rationale for creating reasoning explanations</li> </ul>	<p>By the end of the Second Grade school year, students will implement explanations and state claims.</p> <p>The students will communicate components of a scientific claim and evidence through notebooks, peer and teacher observation, and rubrics.</p>	<p>FOSS, STC science modules</p> <p>Student science notebooks, textbooks, and storybooks.</p> <p>Basic Explanation Rubric</p> <p>Colleague Collaboration</p>



NAME and SCHOOL DISTRICT:

Catasauqua Area School District

- Sheckler Elementary School (K-4)
- Catasauqua Middle School (5th Grade)

GOAL:

**District:** CASD students (K-5) will implement the use of scientific explanations that include the components of scientific reasoning.

**Grade K Goal:** To develop a common language by modeling processing skills of observing and questioning.

**1st Grade Goal:** By the end of the first grade school year, students will implement scientific explanations supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**2nd Grade Goal:** By the end of the second grade school year, students will implement scientific explanations supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**3rd Grade Goal:** By the end of the third grade school year, students will implement scientific explanations supported with evidence. This will be done independently, verbally, and/or in written form. The teacher will guide the evidence and reasoning components.

**4th Grade Goal:** By the end of the fourth grade school year, students will implement scientific explanations supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

**5th Grade Goal:** Students will continue to implement scientific explanations that state claims and be supported with evidence. The students will defend their thinking with reasoning statements. This will be done independently, verbally, and/or in written form.

TIMELINE:

**2011-2012 School Year**

**3rd GRADE: Claudette Burkner, Laura Gregson, Cindy Kuntzman, Wendy Laubenstein, Valerie  
James Wilson**

PLAN STRATEGIES FOR IMPLEMENTATION:

Teacher will review scientific explanations:

- Meaning of an explanation
- Components of an explanation
- Provide models of explanations (strengths, weaknesses, connections to everyday explanations)
- Discuss rationale for creating explanations

Teacher and students create scientific explanations utilizing claims and evidence.

Students create scientific explanations utilizing claims and evidence.

Teacher will assess and provide feedback to students

OUTCOMES TO INDICATE SUCCESS:

By the end of the third grade school year students will state claims and support the claims with evidence.

The students will communicate the two components of a scientific explanation through notebooks, peer and teacher observations and rubrics.

